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Abstract of the Disclosure

A machine and process for filterless wet removal of particles from air, carpets or upholstery, comprised of a suction inlet pipe or other contained conveyance for drawing particle laden air and solvent fluid simultaneously into an impeller, an injection orifice for introducing water or other solvent into the suction, an impeller for atomizing fluid droplets, an impaction anvil to splatter atomized droplets into smaller droplets, an impeller housing configured to create multi-staged low pressure venturi zones to reduce surface tension and enhance entrainment of particles with fluid, a method of causing all dry particles to collide with solvent droplet surfaces, an apparatus of operating an impeller inside a demister and a method of discharging particle laden fluid tangentially to the interior wall of a demister, separating fluid from air and discharging particle laden fluid down a drain and cleaned air back into the original space.